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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/814,579 | 03/31/2004 | Tal Drory | 200315226-1 | 6932 |

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| EXAMINER |
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DAYE, CHELCIE L

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| ART UNIT | PAPER NUMBER |
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2161

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 12/29/2006 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/814,579 | Applicant(s) DRORY ET AL. | |
| | Examiner Chelcie Daye | Art Unit 2161 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>3/31/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is issued in response to Application filed March 31, 2004.
2. Claims 1-23 are pending.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 3/31/2004 was filed on the mailing date of the application. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the specification: item 40 and item 146. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the specification: Fig.3, item 134. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claims 2 and 9 are objected to because of the following informalities:
- Claim 2 should have the word 'is' placed between the terms entries and not, located on the second line of the claim. Appropriate correction is required.
 - Claim 9 contains a semicolon (;) at the end of the sentence, which should be replaced with a period (.). Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

8. Claims 2, 15-16, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2 and 15, the term "if" is a relative term, which renders the claims indefinite. The term "if" is considered alternative language, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Due to the language of the above stated claims, examiner is unsure of what the outcome would be if the statement were not applied. Therefore, the above stated claims will be examined without giving weight to the term "if". Further corrections needed.

Claims 16 and 20 recite the limitation "the recited order" in the second line of the claim, examiner is unsure as to what "order" applicant is referring to, since there is no prior mention of such information. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Art Unit: 2161

Claims 11 and 21 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentability utility.

An invention that is "inoperative" (i.e., it does not operate to produce the results claimed by the patent applicant) is not a "useful" invention in the meaning of the patent law. See, e.g., *Newman v. Quigg*, 877 F.2d 1575, 1581, 11 USPQ2d 1340, 1345 (Fed. Cir. 1989); *In re Harwood*, 390 F.2d 985, 989, 156 USPQ 673, 676 (CCPA 1968) ("An inoperative invention, of course, does not satisfy the requirement of 35 U.S.C. 101 that an invention be useful.").

In the present case, claims 11 and 21, all the system and program to transform a query, create a scan range, and scan data entries. However, the system and program fail to produce a result or a conclusion about the scanned data entries. Therefore, making the system and program simply a manipulation of an abstract idea.

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (lack of utility) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention with utility.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US Patent No. 6,920,446) filed March 21, 2002, in view of Shaw (US Patent No. 6,684,219) filed November 24, 1999.

Regarding Claims 1, 11-13, 16, and 21-22, Wang discloses a system for performing query operations, the system comprising:

a base table having a plurality of spatial objects (column 4, lines 37-43, Wang). However, Wang is silent with respect to an index table that comprises a plurality of data entries, the plurality of data entries being associated with the plurality of spatial objects. On the other hand, Shaw discloses an index table that comprises a plurality of data entries, the plurality of data entries being associated with the plurality of spatial objects (column 10, lines 16-43, Shaw). Wang and Shaw are analogous art because they are from the same field of endeavor of providing a representation of spatial objects. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Shaw's teachings into the Wang system. A skilled artisan would have been motivated to combine as suggested by Shaw at column 5, lines 33-48, in order to permit easy and complete updating of data, more complex queries, and direct exporting of data into the relational tables. Therefore, the combination of Wang in view of Shaw, disclose a module adapted to perform a query operation on the index table (column 14, lines 8-24, Shaw), the module configured to; convert a query window into a plurality of values (column 14, lines 24-56, Shaw); create a scan range for each of the plurality of values with a begin range value and an end

range value from the plurality of values (column 7, lines 50-64, Wang), wherein the scan range includes a stop condition (column 4, lines 22-30, Wang); scan the plurality of data entries for each of the scan ranges to identify one of the end range value and the stop condition (column 8, lines 30-45, Wang); and return a result based upon the plurality of data entries that are within the scan range for each of the plurality of values (column 8, Table 5, Wang).

Regarding Claim 2, the combination of Wang in view of Shaw, disclose the system wherein the stop condition is satisfied if one of the plurality of data entries not Z-value equivalent to one of the plurality of values being utilized to scan the plurality of data entries (column 1, lines 44-46, Wang).

Regarding Claims 3 and 14, the combination of Wang in view of Shaw, disclose the system wherein the index table is a Polygon Map Region QuadTree index (column 13, lines 32-46, Shaw).

Regarding Claims 4 and 23, the combination of Wang in view of Shaw, disclose the system wherein the plurality of data entries each comprises a Z-value field and an object identification field (column 4, lines 46-55 and column 6, Table 3, Wang).

Regarding Claim 5, the combination of Wang in view of Shaw, disclose the system wherein the result comprises a plurality of object identification fields that correspond to a plurality of data entries (column 4, lines 41-50, Wang).

Regarding Claims 6, 17, and 20, the combination of Wang in view of Shaw, disclose a system for performing query operations, the system comprising:

- a base table having a plurality of spatial objects (column 4, lines 37-43, Wang);

- an index table that comprises a plurality of data entries, the plurality of data entries being associated with the plurality of spatial objects in the base table (column 10, lines 16-43, Shaw);

- a module adapted to perform a query operation on the index table (column 14, lines 8-24, Shaw), the module configured to:

- convert a query window into a plurality of values (column 14, lines 24-56, Shaw);

- perform a first scan for one of the plurality of values on the plurality of data entries (column 5, lines 27-41, Wang);

- return a result from the first scan of the plurality of data entries (column 5, lines 54-57 and Table 1, Wang);

- determine whether a second of the plurality of values may return the result with a second scan (column 6, lines 30-36, Wang);

skip the second scan if the second scan is determined to return the result (column 7, lines 58-64, Wang); and

perform the second scan if the second scan is determined not to return the result (column 6, lines 15-24, Wang).

Regarding Claim 7, the combination of Wang in view of Shaw, disclose the system wherein the plurality of values comprises a plurality of Z-values and the plurality of data entries comprise a plurality of fields, wherein one of the plurality of fields is a Z-value field (column 4, lines 46-55 and column 6, Table 3, Wang).

Regarding Claim 8, the combination of Wang in view of Shaw, disclose the system wherein the results comprise an empty identifier or a table having a plurality of Z-values and a plurality of object identifications (column 4, lines 46-55 and column 6, Table 3, Wang).

Regarding Claim 9, the combination of Wang in view of Shaw, disclose the system comprising creating a scan range for each of the plurality of values with a begin range value and an end range value from the plurality of values (column 7, lines 50-64, Wang), wherein the scan range includes a stop condition (column 4, lines 22-30, Wang);

Regarding Claim 10, the combination of Wang in view of Shaw, disclose the system wherein the begin range value is higher than the end range value; and the module is configured to perform the first scan on the plurality of data entries in descending order (columns 3-4, lines 63-67 and 1-2, respectively, Wang).

Regarding Claim 15, the combination of Wang in view of Shaw, disclose the method wherein scanning comprises comparing each of the plurality of data entries to at least one of the plurality of values to determine if each of the plurality of data entries is Z-value equivalent to the at least one of the plurality of values (column 8, lines 15-30, Wang).

Regarding Claim 18, the combination of Wang in view of Shaw, disclose the method wherein the result may be one of an empty identifier or a table that comprises a Z-value field and an object identification field (column 4, lines 46-55 and column 6, Table 3, Wang).

Regarding Claim 19, the combination of Wang in view of Shaw, disclose the method comprising combining each of the results into a result table to be provided to a user in response to the query operation (column 7, lines 23-35, Wang).

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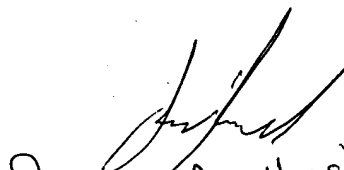
Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chelcie Daye whose telephone number is 571-272-3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chelcie Daye
Patent Examiner
Technology Center 2100
December 1, 2006


Sara Al-Hashemi